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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/942,643	08/31/2001	Hideharu Matsushita	1418.1007	8806

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EXAMINER

GARBOWSKI, LEIGH M

ART UNIT	PAPER NUMBER
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2825

DATE MAILED: 04/10/2002

Please find below and/or attached an Office communication concerning this application or proceeding.

# Office Action Summary

Application No.

09/942,643

Applicant(s)

MATSUSHITA ET AL.

Examiner

Leigh Marie Garbowski

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

## Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☒ Responsive to communication(s) filed on 31 August 2001.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 1-5 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-5 is/are rejected.
- 7) ☒ Claim(s) 2-5 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 31 August 2001 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on \_\_\_\_\_ is: a) ☐ approved b) ☐ disapproved by the Examiner.  
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

## Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a) ☐ All b) ☐ Some \* c) ☐ None of:  
1. ☐ Certified copies of the priority documents have been received.  
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).  
\* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).  
a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☒ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

## Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892) 4) ☐ Interview Summary (PTO-413) Paper No(s). \_\_\_\_\_
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 2. 6) ☐ Other: \_\_\_\_\_

**DETAILED ACTION**

***Claim Rejections - 35 USC § 112***

1. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

2. Claims 1-5 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.
3. As per claim 1, the preamble establishes a "system for generating a 3D model ... and for performing, with a three-dimensional CAD system, a mounting design including a cabinet" [lines 1-4]. However, the body of the claim merely recites a feature ["a converter"] pertaining to "generating a 3D model". Thus, what is meant by "performing ... a mounting design including a cabinet" is not particularly clear because such is not adequately described, particularly with regard to the specific features recited therein (e.g., "a three-dimensional CAD system", "a cabinet"). Therefore, the claim is incomplete, vague and indefinite.
4. The remaining claims, though not specifically mentioned, are rejected for incorporating the error of their respective base claim by dependency.
5. The following rejection is based on the examiner's best interpretation of the claims in view of the issues raised above.

***Claim Rejections - 35 USC § 102***

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

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A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. Claim 1 is rejected under 35 U.S.C. 102(b) as being anticipated by Agonafer et al. [U.S. Patent #5,644,687].
3. Agonafer et al. disclose a PCB design system [column 4, lines 45-67] for generating a 3D model of a PCB which mounts a component on a PCB [column 5, lines 9-20, 38-59] and for performing, with a three-dimensional CAD system [column 7, lines 34-36], a mounting design including a cabinet [column 4, lines 10-27] comprising: a converter for converting the PCB into one or more models based on attributes preliminarily added to the component [column 5, line 60-column 6, line 15].

***Allowable Subject Matter***

1. Claims 2-5 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim [including to overcome the rejection(s) under 35 U.S.C. 112, second paragraph] and any intervening claims.
2. The following is a statement of reasons for the indication of allowable subject matter: although the prior art of record discloses systems for generating 3D models of a PCB, the prior art of record does not specifically disclose or teach the division-type model as recited in claim 2 [which was best interpreted with respect to the specification at page 9, lines 18-20 and page 12, lines 22-27], the unit-type model as recited in claim 3 [which was best interpreted with respect to the specification at page 9, lines 16-18 and page 12, lines 10-17], the library-type model as recited in

claim 4 [which was best interpreted with respect to the specification at page 9, lines 21-23 and page 12, lines 28-31], the single-type model as recited in claim 5 [which was best interpreted with respect to the specification at page 9, lines 20-21 and page 14, line 9-17].

### ***Conclusion***

1. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Free et al. disclose "Recent Advances in Thermal/Flow Simulation: Integrating Thermal Analysis into the Mechanical Design Process." Hubing et al. disclose "EMC Application of EMAP-2: A 3D Finite Element Modeling Code." Osterberg et al. disclose "'MemBuilder': An Automated 3D Solid Model Construction Program for Microelectromechanical Structures." Yook et al. disclose "Application of System-Level EM Modeling to High-Speed Digital IC Packages and PCB's." Kuribayashi et al. [U.S. Patent #6,334,115 B1] disclose an electronic catalog for mounting of components on PCBs. Pease et al. [U.S. Patent #5,297,053] disclose a tool for creating models of PCBs.
2. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Leigh Marie Garbowski whose telephone number is 703-305-9753. The examiner can normally be reached on days.
3. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Matthew Smith can be reached on 703-308-1323. The fax phone numbers for the organization where this application or proceeding is assigned are

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703-308-3431 for regular communications and 703-308-3431 for After Final communications.

4. Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-308-1782.

Leigh Marie Garbowski  
April 4, 2002

LEIGH M. GARBOWSKI  
ATTORNEY

*LMG*